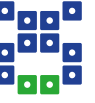


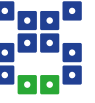
Highlights in pure::variants Release 6.0.4

Date : 2024-01-15



pure::variants 6.0.4 is a service release, which brings a number of notable feature additions and improvements, as well as important bug fixes:

- **Improvements to the pure::variants Web Client** — create new transformation configurations, in-place editing, new filter functions on the compare model and project page and more
- **Desktop Client enhancements and fixes** — with better usability, revision validation, syntax and semantic checks, JavaScript improvements
- **Tool integration fixes and improvements** — drag & drop support, link propagation in IBM ELM tools, multiple authentication methods and other fixes in 3rd party tools
- **Benefit from the most recent tool versions** — compatibility with newer versions of Windchill RV&S, codebeamer, IBM ELM and Eclipse



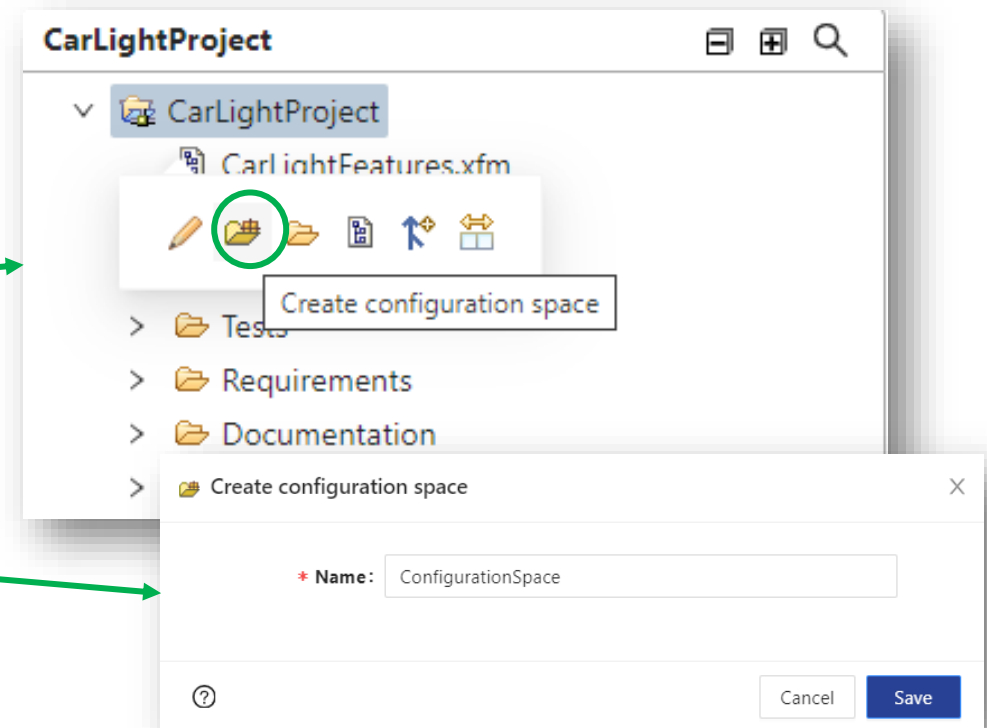
Improvements in pure::variants Web Client

Create Configuration Spaces

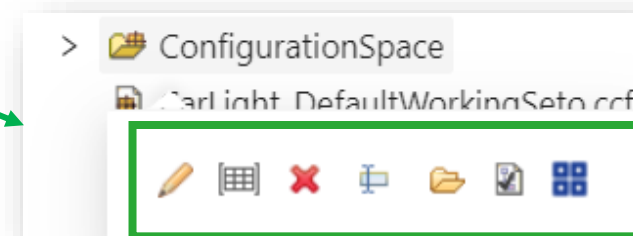


The **Web Client** now allows users to **create configuration spaces. (PV-5667)**

- Hover over a pure::variants project and click the new “Create configuration space” icon in the toolbox.
- After clicking the icon, a dialog box appears asking for the name of the new configuration space.
- Once created, different actions can be performed such as **Open Matrix, Delete, Rename, Create Folder, Create Variant Model and Edit Properties.**



Create new configuration space



Config space action icons

In-Place Editing



Streamline your workflow with **in-place editing** in the **Web Client**, eliminating the need for unnecessary opening of new dialog boxes. **(PV-5767)**

- In-place editing is possible for project items. Some examples:
 - Configuration space settings
 - Transformation settings
 - Project descriptions
 - ...

The screenshot displays the Pure Variants web client interface for the 'AutomotiveDemoCarLight' project. The left sidebar shows a tree view of project items, including 'Regions.xfm', 'Functional_Features.xfm', and 'AutomotiveDemoCarLight.typemodel'. The main content area shows the project details for 'AutomotiveDemoCarLight', including a description and metadata. A green circle highlights a pencil icon in the top right corner of the description field, indicating the in-place editing functionality.

AutomotiveDemoCarLight

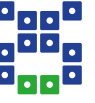
Project

AutomotiveDemoCarLight

A car light system is an integral component of an automobile, encompassing headlights, taillights, brake lights, turn signals, and additional lighting elements designed to ensure visibility, safety, and communication on the road. Headlights illuminate the road ahead, while taillights convey the vehicle's presence and width to others. Brake lights signal slowing or stopping, turn signals indicate directional changes, and reverse lights aid in backing up. Overall, a car light system plays a crucial role in optimizing visibility and safety for both the driver and other road users.

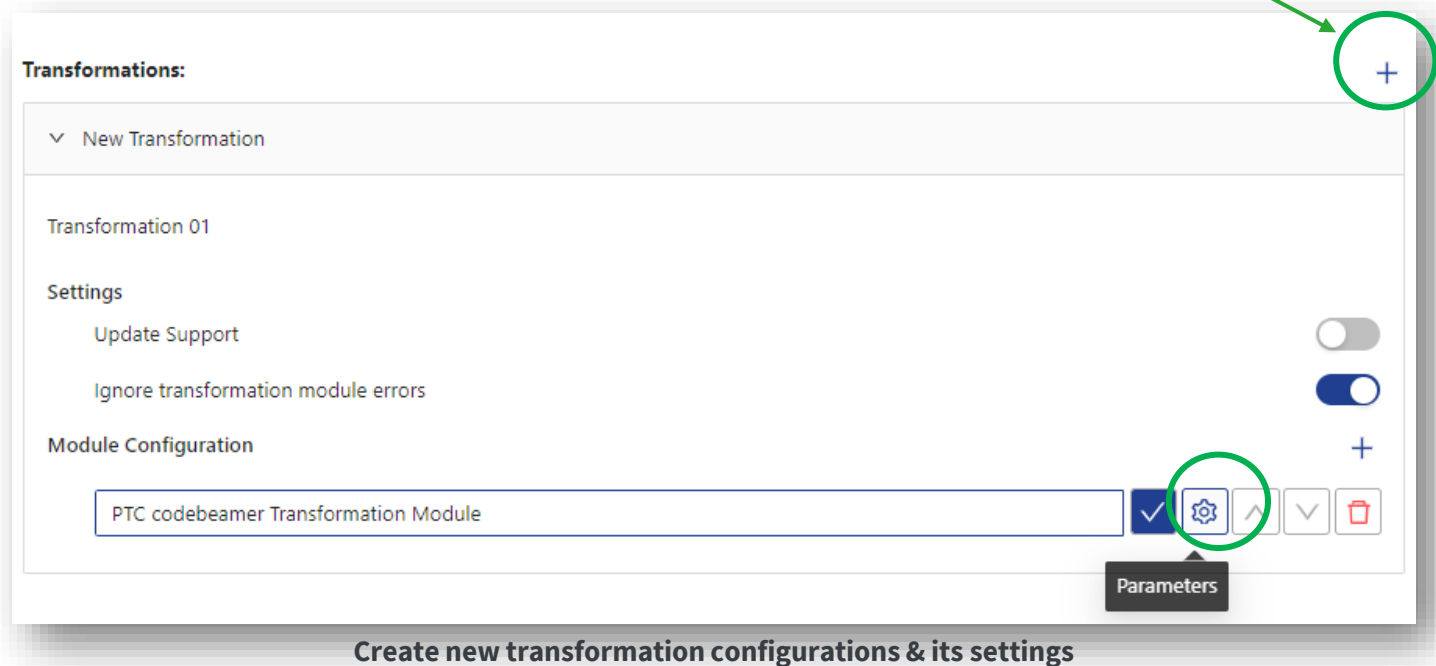
Unique ID:	icsGFvseMF1csVgfH	Type:	ps:project
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In-place editing of project description



Create New Transformation Configurations

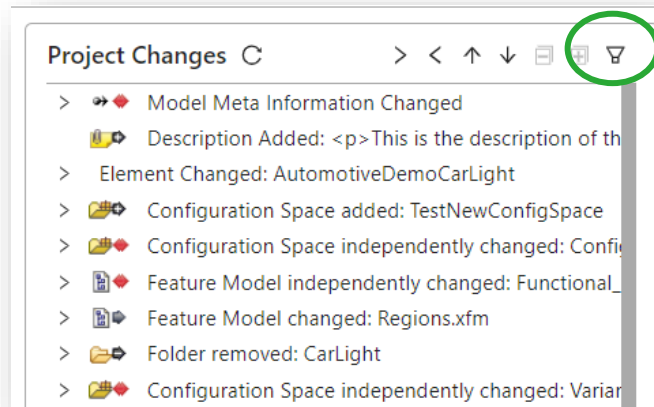
Now, it is possible to seamlessly **create new transformation configurations** within the **Web Client**. You can also modify transformation configuration settings, rename, edit parameters, and more, all in an in-place style. **(PV-5668)**



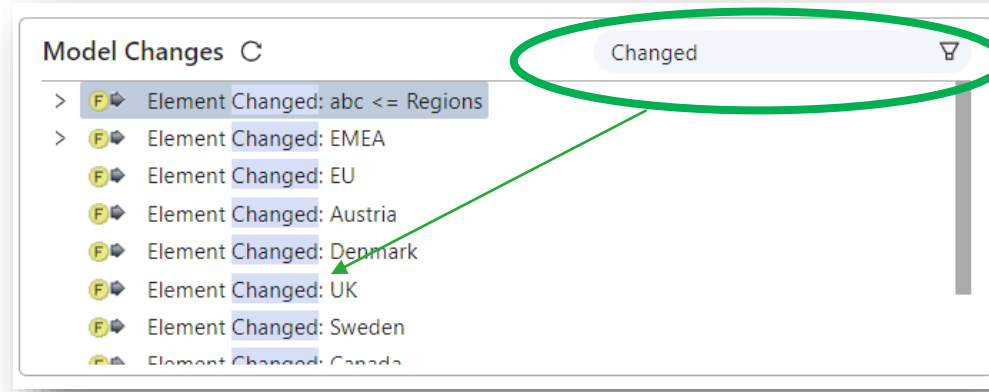
UI Improvements and Fixes



- Review project and model changes with ease using the new filter function on the compare page. **(PV-5662)**



Filter project changes...



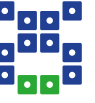
... or model changes.

- Fixed some UI glitches in the Web Client. **(PV-5672, PV-5642, PV-5689, PV-5697)**
- Increased stability of the pure::variants model server. **(PV-5655, PV-5649, PV-5733)**

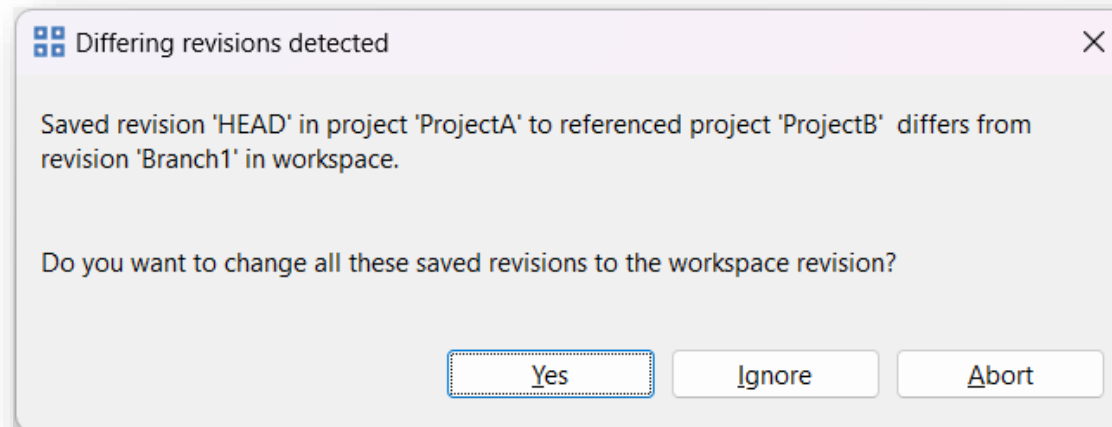


Improvements & Bug Fixes in the Desktop Client

Usability Improvements



- Model server projects can reference specific revisions of other projects. Previously, it was difficult to detect a mismatch between the stored revision and the revision currently loaded in the workspace. Now, a check is in place that helps users identify and resolve such mismatches. **(PV-4887)**



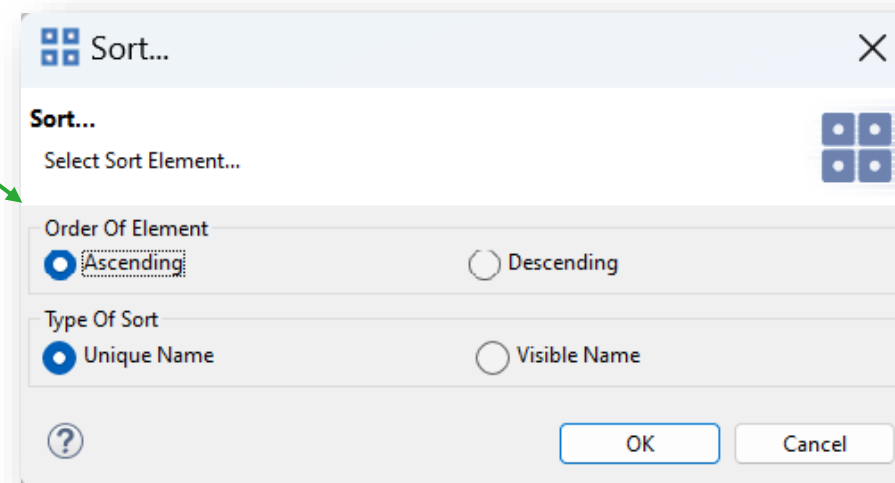
Revision check dialog box

- Switching a model server project to a different revision failed to load referenced projects in certain cases. Fixed. **(PV-5495)**

Improvements and Fixes



- **Syntax and semantic checks** can now be executed in **headless** mode. Detect inconsistencies early as part of your CI/CD workflow and ensure that the actual variant transformation will succeed. **(PV-4275)**
- The new action **Refactor > Sort** allows to sort child elements in feature and family models in ascending or descending order based on unique name or visible name. **(PV-5025)**
- pure::variants JavaScript improvements:
 - Added `getConfigurationSpacePaths` to the public API, a function to list a project's configuration spaces. **(PV-5580)**
 - Published the JavaDoc of the `pure_variants()` context object. Check the JavaDoc of the classes `PV` and `PVContext` in the pure::variants Extensibility Guide to get information on all available methods. **(PV-5765)**



Sort elements dialog box



Integration Fixes & Enhancements

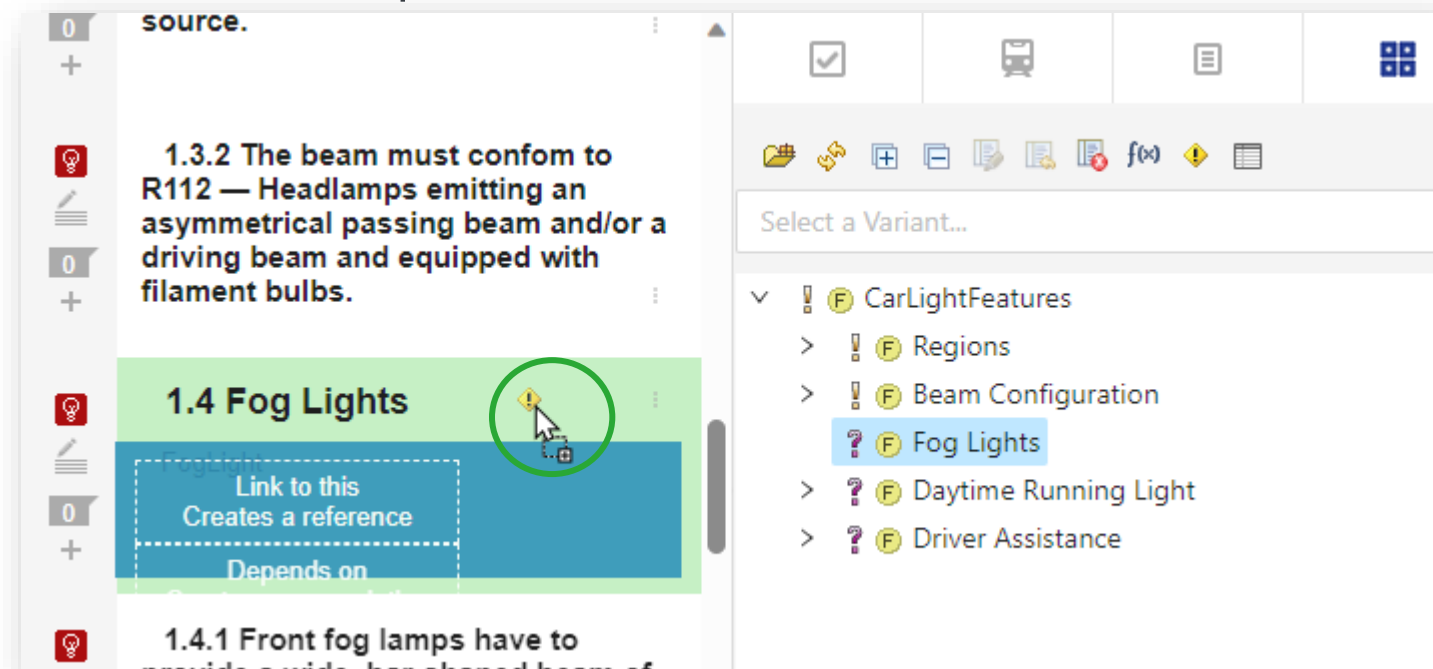




Drag & Drop for Restrictions and Calculations

Drag & drop support for adding restrictions and calculations in **codebeamer**, **IBM DOORS Next**, and **Siemens Polarion**. (PV-5273)

- Drag and drop a feature or family model element to add a restriction.
- Drag and drop an attribute into the requirements text to add a calculation.



Adding a calculation to a codebeamer requirement using drag & drop

Link Propagation in IBM ELM



Write fewer restrictions in **IBM DOORS Next** and **IBM Engineering Test Management** through **link propagation**. (PV-2286, PV-4780, PV-4781)

- Exploit existing links between artefacts to propagate one artefact's restriction onto another. Some examples:
 - Propagate a requirement's restriction to its associated test cases along a "tests" link.
 - Propagate a high-level requirement's restriction to its low-level requirements along a "refines" link.
- Define link type mappings conveniently in the settings of the IBM DOORS Next widget.
- Link propagation works within the same tool (e.g., only within DOORS Next) as well as across tools (i.e., between DOORS Next and ETM).
- Works with quick-mode and full-mode family models.

CarLightRequirements.ccfm

- CarLightRequirements
 - doorsng:requirement: Indicator Lights
 - doorsng:requirement: Head Lights
 - LowBeam
 - doorsng:requirement: Low Beam
 - doorsng:requirement: The beam pattern must fulfil the Federal Motor Vehicle Safety Standard 108.
 - doorsng:requirement: High Beam
 - doorsng:requirement: Fog Lights
 - doorsng:requirement: Assistance Systems
 - "Driver Assistance"
 - linkpropagation: ("doorsng:requirement: Indicator Lights") IMPLIES SELF
 - doorsng:requirement: Cornering Light
 - CorneringLights
 - doorsng:requirement: ...
 - doorsng:requirement: ...

Link propagation settings in pure::variants widget

pure::variants

Connection Calculation General * Visualization About

Define Link Semantics:

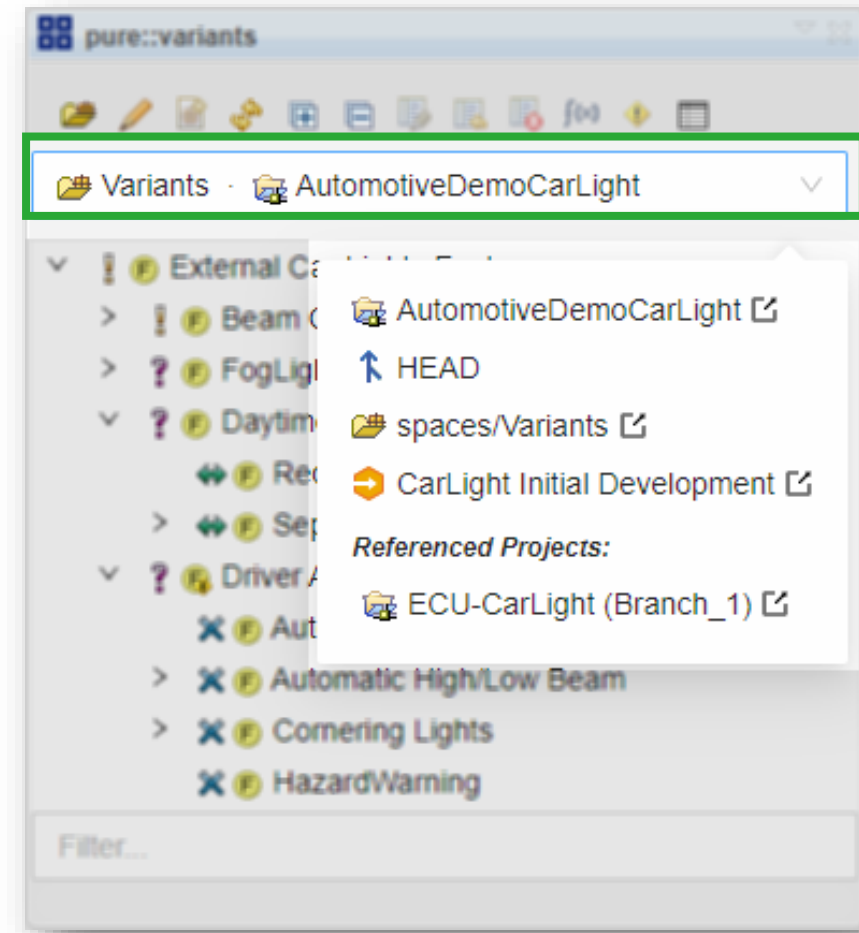
<input type="checkbox"/>	Extraction	Required For
<input type="checkbox"/>	Synonym	Required For
<input type="checkbox"/>	Artifact Term Reference	Required For
<input type="checkbox"/>	Embeds	Required For
<input checked="" type="checkbox"/>	Decomposition	Requires
<input type="checkbox"/>	pvRelation	Required For
<input type="checkbox"/>	Link	Required For

OK Cancel

Notable Improvements



- All web-based integrations (**Polarion, IBM DOORS Next and codebeamer**) now indicate more clearly which configuration space is currently open. A tooltip provides additional details. **(PV-3771)**
- All web-based integrations also show the revision of the selected pure::variants project in Web Hub mode. **(PV-4195)**
- Support for partial text substitution in test steps for our **IBM Engineering Test Management** connector. **(PV-3963)**
- Associated test scripts at keywords are now considered during the transformation in **IBM Engineering Test Management.** **(PV-5429)**

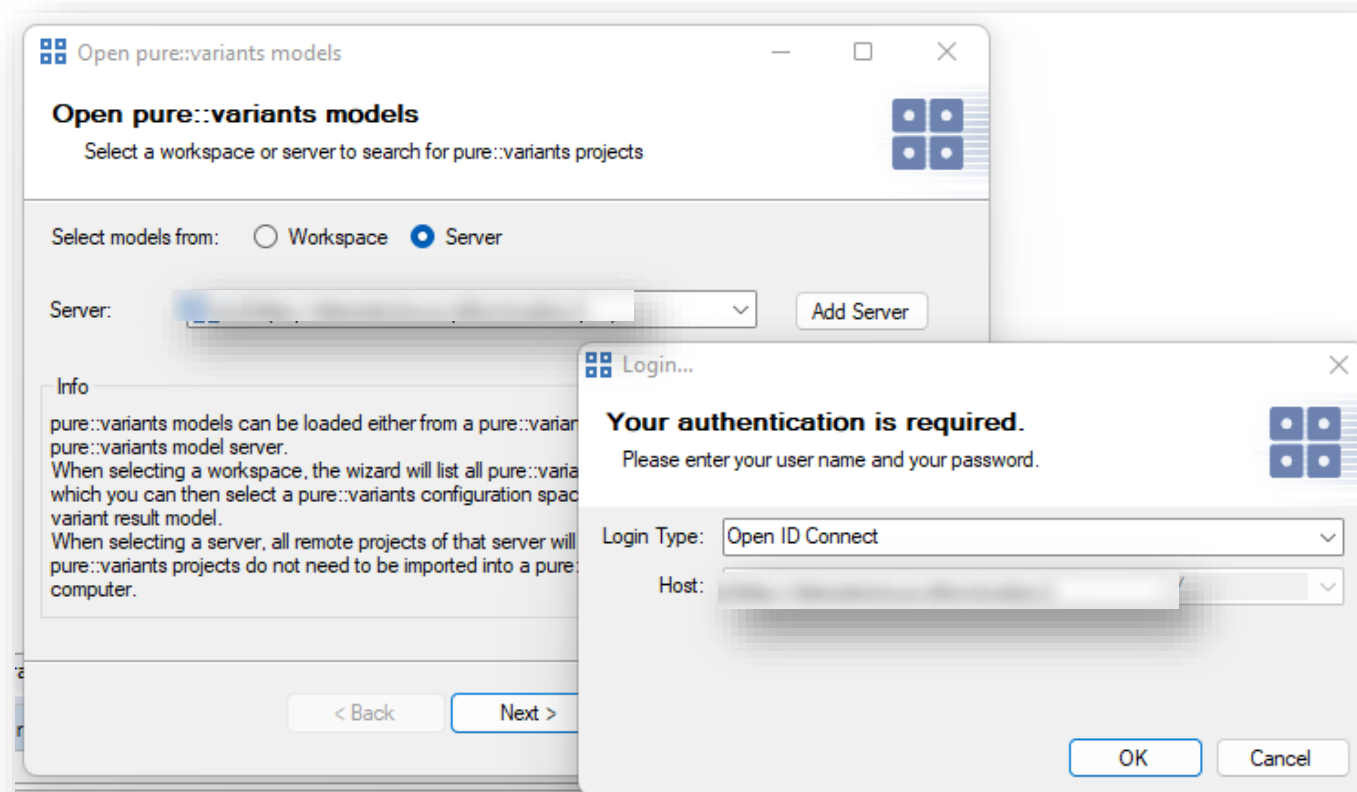


Widget showing relative path of configuration space

Choices with Multiple Login Methods

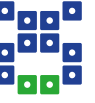


All **pure::variants integrations** for desktop-based tools now allow choosing the authentication method when connecting to the model server. This enables setups in which a primary authentication method is backed up by a fallback authentication option. **(PV-5046)**



Model server authentication dialog box

Notable Fixes and Improvements



- Test-step annotation in **codebeamer** did not work when the “Critical” column of a test-step table is hidden. Fixed. **(PV-5688)**
- Improved error message if a transformation fails because of un-committed changes in **IBM Engineering Systems Design Rhapsody**. **(PV-5683)**
- Referenced work items in documents are now resolved correctly in **Siemens Polarion**. **(PV-5431)**
- The copy transformation now maintains item IDs to reuse and sync IDs for better traceability in **Jama**. **(PV-4468)**
- Fixed an exception in the copy transformation for **Jama** that was raised when the target project does not allow item types that occur in the source project. **(PV-5397)**
- Fixed a string encoding issue that could cause pvSCL calculations in **IBM DOORS Classic** to be interpreted incorrectly if they contained non-ASCII characters. **(PV-5403)**
- Improved handling of known server preferences (e.g., pure::variants Model Server, IBM DOORS Next server) in pure::variants. **(PV-5113)**



Version Updates





The following new versions of 3rd party tools have been verified to work with pure::variants 6.0.4:

- Windchill RV&S 13.2.0.0
- codebeamer 22.04-SP6
- Eclipse 2023-09
- IBM ELM 7.0.1 SR1 iFix018
- IBM ELM 7.0.2 iFix025
- IBM ELM 7.0.2 iFix026
- IBM ELM 7.0.3



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